REMARKS

Claims 1 to 5, 9, 10, 13 to 20 and 22 to 31 continue to be in the case.

The Office Action refers to Claim Rejections - 35 USC § 103.

Claims 1, 2, and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen (US 5,773,943).

Applicant wishes to submit additionally the following considerations in support of patentability.

Barriers for persons have to meet very high requirements. Persons are not to be endangered under any circumstances, the barriers have on the other hand to react very quickly. The closure motion in order to for example to block access or passage for an unauthorized person has to be started very rapidly and then evolve quickly without endangering the person concerned. In this context, fancy gear drives and expensive mechanics are awkward and impede and pose equipment limits.

The known barriers in the prior art for persons include a large number of mechanical parts, which are very much subject to wear, which can lead to expensive service requirements and repairs, compare US 2003/0029089 and EP 0290 957 B1 page 1, paragraph 4 to page 2, paragraph 2 or, respectively, page 1, line 26 to page 2, line 20. These failures of the barriers are particular disadvantageous in connection with highly frequented passage barriers. Such barriers are to operate over several years and they have to accept

during such time a very high number of movements. Depending on the kind of barrier different and usually very high safety requirements have to be met especially also for the protection of persons. In order to prevent the unauthorized entry of a person after an authorized person, the so-called tail gaiting, quickly reacting and quickly closing barriers are required in addition to corresponding sensor circuits. Rapidly closing barriers entail however a risk of injury for the persons passing through. Thus it is unavoidable that the drive for the barrier upon recognizing a person in the blockage region can immediately be stopped or reversed, which also presents a high load of the mechanical system. The noise produced by the mechanical parts is perceived as interfering and annoying. The gear is further perceived as a hindrance, when in the course of a power failure the barrier is to be opened automatically.

Depending on the safety requirements or the user frequency, the most different kinds of barriers are employed. The different construction forms cause also different motor sizes and shapes. This multitude of drives and device components makes the logistic difficult at the manufacturer, leads to small series of products and thus to high costs and high prices.

The most different kinds of barriers are employed depending on safety requirements and user frequency. The different construction forms cause also the most different motor and gear sizes and forms. This variety of drives and device components.

It is an object of the invention to furnish a drive device, which minimizes the number of wear associated components, which components allow a soft accelerating and braking of the moving masses, and which permits a low noise operation of the barrier. The new drive device is suitable for a multitude of kinds of passage and drive through barriers and is to reduce drastically the previously required multitude of different drives. Ideally, all up to now known kinds of passage and drive through barriers should be energized with one and the same motor type. The servo motor employed has to be automatically controlled for protecting the persons passing through.

The rotation speed of the motor can be exactly controlled with the automatic servo controller. The torque, and therewith the force to be applied at the element to be moved, can correspondingly be adapted or, respectively, limited to the respective requirements at the automatic servo controller by way of software. Profiles of motion such as a soft acceleration and braking can be predetermined. Step down gears and coupling gears can be dispensed with based on the direct drive, which further lowers the production costs. The parts subject to wear are reduced to an absolute minimum, such that the drive device runs nearly noiseless. The drive device can be universally employed and can be adapted to the most different requirements. In the course of a longer operating time less maintenance work is required over longer time intervals. The drive system applicable for

the most different regions of application also renders the logistic more simple.

The concept of the present invention of having a barrier with a common shaft of the barrier and of the motor is not contained in the art of record. The system of Anderson is in many aspects different from the present invention. The simplicity of the present invention is nowhere suggested in the references applied.

Reconsideration of all outstanding rejections is respectfully requested.

All claims as presently submitted are deemed to be in form for allowance and an early notice of allowance is earnestly solicited.

Respectfully submitted,

Lothar Lais

By: Horst M. Kasper

Horst M. Kasper, his attorney,
13 Forest Drive, Warren, N.J. 07059
Tel.:(908)526-1717 Fax:(908)526-6977
Reg. No. 28,559; Docket No.: ERT208

/Rep/am